



Polyethylene Bormed™ HE9601-PH

Description

Bormed HE9601-PH is a resin intended for evaluation for use in Healthcare applications.

Bormed HE9601-PH is a high density polyethylene with narrow molecular weight distribution typically used in high-speed injection moulding of articles demanding easy flow. The material is specially designed for applications which are characterised by long flow path and high stiffness. Material can be sterilised with ethylene oxide, steam and radiation up to 35 kGy; as a result of sterilisation by radiation some minor yellowing can occur.

Applications

Bormed HE9601-PH has been evaluated according to different regulations and norms. Typical applications are mentioned below for Medical devices or Pharmaceutical & Diagnostic packaging. However, Borealis should be consulted for final approval to evaluate the use of Bormed HE9601-PH.

Plungers for non pre-filled disposable syringes
Needle cover
Caps and closures

Bottles and containers for tablets
Bottles and containers for powder
Bottles and containers for granules

This grade may only be used for the applications listed in the Product Datasheet and only to the extent that the application is within the scope of the tests set out in the Statement on Compliance to Regulations on Medical Use for that grade. If an application is not listed in the Product Datasheet, the grade can be used for such application only after express written consent of the Borealis Marketing Manager, Healthcare. Borealis prohibits the use of any healthcare grade product in an implantable device that is introduced into the human body by surgical intervention and that is intended to remain in place following surgical procedure.

Special features

High stiffness
Easy flow

Physical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Density	960 kg/m ³	ISO 1183
Melt Flow Rate (190 °C/2,16 kg)	31 g/10min	ISO 1133
Flexural Modulus	1.200 MPa	ISO 178
Tensile Modulus (1 mm/min) ¹	1.250 MPa	ISO 527-2
Tensile Strain at Yield (50 mm/min)	9 %	ISO 527-2
Tensile Stress at Yield (50 mm/min)	28 MPa	ISO 527-2
Heat Deflection Temperature	71 °C	ISO 75-2
Charpy Impact Strength, notched	2,5 kJ/m ²	ISO 179/1eA
Hardness, Shore D	62	ISO 868

¹ Measured on injection moulded specimens acc. to ISO 1872-2

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Processing Techniques

Following moulding parameters should be used as guidelines:

This product is easy to process with standard injection moulding machines.

Melt temperature	180 - 240 °C	
Holding pressure	As low as possible	Minimum to avoid sink marks.
Mould temperature	10 - 40 °C	
Injection speed	As high as possible.	

Shrinkage 1 - 2 %, depending on wall thickness and moulding parameters

Storage

Bormed HE9601-PH should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which results in odour generation and colour changes and can have negative effects on the physical properties of this product.

Safety

The product is not classified as dangerous.

Recycling

The products are suitable for recycling using modern methods of shredding and cleaning. In-house production waste should be kept clean to facilitate direct recycling.

Please see our "Safety data sheet" / "Product safety information sheet" for details on various aspects of safety, recovery and disposal of the product. For more information, contact your Borealis representative.

Related Documents

The following related documents are available on request, and represent various aspects on the usability, safety, recovery and disposal of the product.

"Safety data sheet" / "Product safety information sheet"
 Recovery and disposal of polyolefins
 Information on emissions from processing and fires
 Statement on chemicals, regulations and standards
 Statement on polymer additives and BSE
 Statement on compliance to food contact regulations
 Statement on compliance to regulations on medical use

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Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

No liability can be accepted in respect of the use of any Borealis product in conjunction with any other products and/or materials. The information contained herein relates exclusively to our products when not used in conjunction with any other material unless as specifically provided for in the test methods stated above.